The Weather Enterprise: Conflict or Cooperation?

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Weather and Climate is Big Business

99% of executives surveyed say improved weather insights can reduce annual operating costs.

93% of executives surveyed report that improved weather insights can positively impact annual revenue growth.

68% of executives surveyed expect that weather insights as a service would be more valuable than raw data.

IBM Institute for Business Value: Just Add Weather, 2018
Disruption Across the Value Chain

But much room for improvement across this chain!
The weather is big business, and it’s veering toward a collision with the federal government

Now for your local weather forecast: That’ll be $10, please
What’s Worked to Date?
US Warning System

- NWS is sole authority
- Broadcasters/digital providers deliver in a timely manner, unaltered with attribution
- Why: Public safety, liability concerns
- Challenges:
  - Warning formats lag industry trends
  - Business interests/needs surpass government services
Flash Flood Warnings

BULLETIN - EAS ACTIVATION REQUESTED
Flash Flood Warning
National Weather Service Duluth MN
629 PM CDT MON JUN 18 2018

The National Weather Service in Duluth MN has issued a

* Flash Flood Warning for...
  A Dam Failure in...
  East central Pine County in east central Minnesota...
  Southwestern Douglas County in northwestern Wisconsin...
  North central Burnett County in northwestern Wisconsin...

* Until 630 PM CDT Tuesday

* At 629 PM CDT, local law enforcement reported the Radigan Flowage Dam west of Dairyland has failed, causing flash flooding downstream on the Tamarack River south of the Dam as it flows towards the Saint Croix River.
Collaborative Forecasting

Collaborative Convective Forecast Product

Why: Driven by user (airline) needs

How: 30 minute chat room for collaboration; NWS makes final decision

Limited in scope but successful
NCAR Community Modeling

Federal funding provides infrastructure
Sharing is encouraged but not required
Incentives for sharing include professional development for staff
US Federal Appropriations and Legislation Process

- Successes:
  - Private Sector support for NOAA satellites and Federal research funding
  - US Weather Forecast Improvement Act
  - New modeling approach: EPIC ??
US Weather Enterprise

Conflict  Productive Communication  Coordination  Collaboration

1990's  2019

On-going engagement/ few NOAA policies and structures
Issues and Considerations

- Public Good
- Economics
- National interests
- Evolving business trends (e.g., Systems as a Service)
Next Steps?
What’s in our tool box?

- Community forums for discussion
- Tailored collaborative experiments
NOAA’s Big Data Project

- Innovative
- Expanded private sector players
- Broad umbrella for efforts
Data Policy

- Commercial data is here and now
- Open access to some data is established practice
- National policies must be adaptable to what will be evolving amounts of commercial data

Do we need to set a ‘floor’ for what is open and sharable and adjust the ‘floor’ as science and technology evolves?
Centennial Meeting and Celebration

January 11-16, 2020
Boston, MA